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UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF AGRICULTURAL ECONOMICS  
WASHINGTON, D. C.

For Administrative Use Only

RECOMMENDATIONS OF SUB-COMMITTEE ON STATISTICAL PROGRAM FOR FRUITS AND VEGETABLES

FRUITS AND TREE NUTS

I. PRODUCTION STATISTICS

A. Raw Products

1. Addition of Small Fruits and Quinces: For many years an active demand has existed for acreage and production statistics for small fruits. Of the 11 small fruits, annual estimates are available for only 2, cranberries and strawberries. No annual information is available on quinces. Requests for information on these crops can be answered only by referring to the Census of Agriculture which supplies these data at 5 to 10-year intervals. Obviously, such infrequent reports are entirely inadequate for use of the industry when production, marketing programs and price policies are under consideration.
2. Collection of Data on Numbers and Acreages of Trees: At present the only available information consists of numbers of trees and production enumerated at 5 or 10-year intervals by the Bureau of the Census. These censuses provide no information on the relative importance of the principal varieties and likewise give no indication of the average age of the trees. Information on numbers of trees by varieties and age groups is vital to growers in appraising future trends of production and shifts between varieties. Without such advance information it is impossible to anticipate future marketing problems and it is also impossible for growers to decide when to make new plantings and what varieties. Considering the fact that it takes from 5 to 10 years to bring an orchard into commercial production, commercial fruit growers cannot maintain the proper balance between supply and demand of fruits unless they have the facts relating to the size of the present fruit enterprise and probable production trends.

In addition to information by varieties and age groups, it is important that fruit growers have separate information on irrigated and non-irrigated production. Such information is needed in studies relating to efficiency of production under various conditions.

3. Restoration of non-commercial Apple Estimates: Estimates of apple production were restricted by Congress in 1939 to the commercial crop. This restriction was imposed at the instance of representatives of certain apple organizations. During recent years, however, representatives of the apple industry have changed their views and have come to recognize that total supply, including production in farm and small marginal commercial orchards, has more influence on price than the so-called commercial supply. In line with this view the National Apple Institute has requested the Department of Agriculture to resume estimates of total apple production to supplement the present commercial apple series. Nothing can be done toward restoring the non-commercial estimates until the restrictive clause is deleted from the Appropriations Act.

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4. Indexes of Acreage, Yield and Production: In view of the many kinds of fruits that contribute to the over-all production a reliable yardstick is needed to measure the change in the aggregate production and average yield per acre of fruits from year to year.

## B. Processed Products

At present annual pack statistics are collected by trade associations for the principal fruits used for canning, freezing, drying, etc. Extensive information was also collected during the war by the various Government agencies having the responsibility of allocating and rationing supplies. Existing statistics on the annual packs of canned, frozen, and dried fruits need to be consolidated and a well defined program set up for the collection and publication of pack figures on a quarterly basis for each of the processing categories.

## II. STOCKS STATISTICS

### A. Raw Products

1. Addition of Cold Storage Stocks Estimates of Grapes, Lemons, Almonds, Filberts, Pecans and Walnuts: At present monthly reports are made by the Department of Agriculture on quantities of apples and pears in cold storage. This information is so useful to the industry that the cold storage reports should be expanded to cover grapes, lemons, almonds, filberts, pecans and walnuts.
2. Inauguration of Common Storage Estimates for Certain Crops: The stocks picture on fruit crops is incomplete because no official statistics are available on quantities held in common storage, on farms or near areas of production. This information should be added to the cold storage stocks so that full information will be available monthly on total supplies available for market.

### B. Processed Products

1. Stocks of Frozen and Dried Fruits in Hands of Processors and Distributors: Information on stocks of processed fruits is very limited. Most of the available information relates to stocks of canned fruits in the hands of processors and wholesale distributors. Information on processors' stocks is collected by various trade agencies and is supposed to be a complete enumeration. Information on stocks in hands of wholesale distributors consists of sample surveys of identical firms and is collected by the Department of Commerce. Similar information is needed on dried fruits and on frozen fruits. These are important categories in fruit processing and dependable information is needed for studies of marketing and consumption.

## III. DISTRIBUTION STATISTICS

### A. Raw Products

1. Shipments from Areas of Production: Complete shipment records of fruits from areas of production are needed by everyone engaged in the production and marketing of these products. At present records of carlot shipments are collected daily from railroads by the Department of Agriculture. These records show shipments of the major fruits by points



of origin in each State and county. While this information is tremendously useful to growers, buyers, railroads and consumers, it needs to be expanded to cover a number of fruits and tree nuts not recorded at present.

Carlot shipments by rail and boat comprise only a part of the total movement of fruits to market. Additional quantities move in mixed cars and by l.c.l. express. Shipments by motor truck have also become quite important and it appears that we may be on the threshold of air borne transportation. At present no information is available on quantities shipped other than in carlots by rail and boat. It is vitally important to production and marketing operations to round out the picture on shipments.

2. Unloads at Principal Markets: Unload statistics at principal markets are needed to show the marketing distribution of fruits, by States. At present the Department of Agriculture maintains unload records of carlot shipments by rail and boat for 25 cities and motor unload records for 13 cities. Obviously, records on a limited number of cities fail to show the complete distribution from the various States. It is recommended that unload records of rail and boat shipments be inaugurated for 75 additional cities, and motor truck shipments for an additional 87 cities, making a total of 100 principal markets for which this information will be available.

#### B. Processed Products

1. Movement of Processed Products into Consumption Channels: There is much demand for information showing monthly or seasonal rate of flow of canned and processed fruits between processor and consumer. Price analyses and studies of marketing practices and civilian consumption habits require this type of information. At present very little information is available.

### IV. DISPOSAL AND USE STATISTICS

#### A. Raw Products

Aggregate production of the major fruit crops has doubled during the past 25 years. With this big increase in production, marketing practices have become more complex and it is necessary that growers have access to complete information on disposal and use of production in order to market their crops efficiently and profitably. It is not sufficient to have information on total production. Growers want to know what outlets are available for their fruits and about how much tonnage they can expect to market through each outlet. For example, processing has increased in importance with the increase in production and growers want statistics on quantities and prices of fruits marketed in this way.

It is necessary to expand the present estimates of farm disposition of production to show more information on utilization of sales. Farm disposition estimates show total production, economic abandonment



consumption on farms where grown and total sales. A beginning has been made in estimating utilization of sales according to type and method. The need is for separate statistics on fresh sales by method of sale and on the various methods of processing, such as canned, frozen, dried or dehydrated. Since this information is needed in advance of the current marketing season, it is recommended that the program of disposal and use statistics be developed to show: (a) preliminary estimates of farm disposition and utilization of sales in January of the year following production, and, (b) final estimates of disposition of production and utilization of sales later in the year after complete check data have become available.

## V. PRICES, VALUE AND INCOME

### A. Raw Products

Additional price information is needed along the following lines:

1. Complete Series of Prices by Type of Utilization and Method of Sale by Growers: In keeping with the breakdown of total sales showing quantities sold for each type of utilization and by various methods, similar price information is needed on each of these categories. Growers should have dependable information on the relative prices to be expected for sales to processors to compare with similar information on sales for fresh market consumption. In addition, these prices should be shown for specific methods of sale so that they can be compared from year to year and between various producing States. Such information is required if growers are to have an adequate guide in making their decisions on disposing of their crops.
2. Auction and Wholesale Prices on More Commodities and Additional Markets: At present auction prices are available at 10 markets on a limited number of crops. Wholesale prices exclusive of auction prices are reported at 21 terminal markets. It is recommended that wholesale prices be collected at 79 additional terminal markets and that the list of crops be expanded to include all fruit and nut crops on which sales are significant.
3. Retail Prices on Additional Fruits: Retail prices are now collected monthly by the Bureau of Labor Statistics, U.S. Department of Labor, on apples, oranges and grapefruit. It is recommended that this series of retail prices be expanded to include all important fruits and tree nuts.

### B. Processed Products

Processed Products: Prices Received by Packers, Wholesalers and Retailers: On processed products prices received by packers and wholesalers are not available except in the form of fragmentary quotations listed in trade journals. On retail prices, a limited amount of information is collected for processed products by the Bureau of Labor Statistics. Complete series of prices for processed products should be established at the packer level, wholesale position and at the retail level as a means of showing margins between the farm and market and also in appraising marketing policies and studying consumption in relation to prices.



## VII. ENUMERATIVE SURVEYS

RECOMMENDATIONS

For the most part enumerative surveys of the fruit enterprise have been limited to enumerations made at 5-year intervals by the Bureau of the Census. Occasionally, however, enumerations have been made by the Department of Agriculture in selected areas. An example of this type of survey is the enumeration made in 1936 of the acreage of California fruits and nuts by varieties and age groups. The cost of this survey was defrayed mostly by the Works Progress Administration, but it has been maintained currently by appropriations by the California State Legislature. Other surveys of this type have not been kept up-to-date. Additional needs in the field of enumerated surveys are as follows:

1. Separation of Census Data on Tree Numbers to Show Trees of Bearing and Non-bearing Age: The Census of 1945 will be of limited usefulness because fruit trees of all ages were lumped together. Because of the failure of the Census to make this breakdown showing trees of bearing age and trees of non-bearing age, it is impossible to draw even approximate conclusions regarding future trends in the numbers of bearing trees for each kind of fruit. It is recommended that future enumerations of the Bureau of the Census show this breakdown.
2. Full Coverage by the Census of all Fruits in Each State: Past Censuses of Agriculture have been notably weak because of failure to list all fruits on the schedule, or failure to obtain complete coverage for those listed. These weaknesses may be attributed to a tendency to regard fruit crops as minor items and to concentrate efforts on the enumeration of so-called major crops. It is strongly recommended that the quinquennial census of agriculture (taken between the decennial general censuses) make effort to include all fruits on the schedule so that enumerators will be given an opportunity to obtain adequate records of trees and production. If the customary appropriation is too small to expand the schedule beyond its present length, it is recommended that efforts be made to obtain sufficient funds to do a creditable job on fruit crops.
3. Base Surveys at 5-year Intervals on Numbers of Trees by Varieties and Age Groups: Since it takes from 5 to 10 years to develop a fruit orchard to the point of commercial production, intelligent action in planting new orchards or in removing old ones depends upon accurate information on the relative importance of the various varieties in existing orchards and the makeup of the orchards with respect to age of trees. Specific information is needed on numbers of trees, by age groups, for each variety in order to make intelligent appraisals of future production for the benefit of growers who must know these facts in advance of making plans for future operations. It is recommended that basic surveys of this type be made at 5-year intervals.

## VIII. COUNTY STATISTICS

### A. Raw Products

Probably the most frequently requested statistics are estimates of acreage, production and prices for individual counties. Invariably, it is necessary to refer such requests to the periodic Census publications which show these data at 5-year intervals. Annual estimates by counties are needed to meet existing demands.



## IX. NURSERY PRODUCTS

Annual information on nursery products is not available. The Bureau of the Census showed in 1940 the acreage and value of nursery products. Similar information will not be available until the Census of 1950. For the intervening years no information is available on the importance of the industry, nor on the numbers of trees sold for planting on farms or elsewhere. Adequate information is needed annually on numbers of trees sold by nurseries for planting in commercial orchards in order to appraise the probable trend of production in these orchards.



I. PRODUCTION STATISTICS

A. Raw Products

1. Coverage of Local Market Vegetables: The present estimates of the Department of Agriculture of acreage and production embrace only that part of the commercial crop grown primarily for fresh shipment out of the areas of production or as a source of supply for commercial processors. The statistics do not cover that part of commercial production grown adjacent to towns or cities for local sale. This segment of commercial production is sometimes known as market garden production. However, it is an important segment of the commercial vegetable picture and furnishes an important part of the total fresh vegetable supply during certain periods of the year. It is probable that local market vegetables comprise as much as 40 percent of the total fresh market vegetable production, although we cannot be sure because statistics are not available. Considerable interest in and demand for statistics on the production of market garden vegetables have been manifested from time to time by growers, nutritionists and by the various agencies charged with the responsibility of appraising total supplies and allocating these in an equitable manner. It is recommended that appropriate surveys be made of market garden vegetable production.
2. Reports on Prospective Plantings of all "Fresh Shipment" Vegetables: At present the Department makes reports on prospective plantings of only 4 vegetables for fresh shipment, namely, asparagus, cabbage, onions and watermelons. Similar reports have not been issued for all other important crops because of the lack of facilities for performing this additional service. Growers and others are interested, however, in having preplanting indications of the probable change in acreage as a guide in adjusting production plans for the current season or of formulating advance programs for the efficient and orderly marketing of the crops.
3. Expansion of Present Program of Acreage and Production Estimates to Include All Vegetable Crops: The present program of acreage and production estimates embraces about 30 crops for fresh market shipment. Approximately 10 more crops should be added to the fresh market shipment list to complete the supply statistics on vegetables for fresh market shipment.

The present program of estimates of vegetables for commercial processing is limited to 11 crops. During recent years, however, a number of additional crops have become important in the field of processing. Statistics should be collected on the acreage and production of about 11 more crops for commercial processing in order to round out the supply picture in the processing field.

4. Segregation of Acreage, Yield and Production Statistics to Show Separate Data on Irrigated and Non-irrigated Acreage in 17 Western States: Information on irrigated and non-irrigated lands in the 17 Western States is needed for use in cost studies for crops produced on these lands.



5. Development of Indexes of Acreage, Yield and Production: In compiling statistics on the acreage, yield per acre and production of a group of similar commodities in which the number of commodities is large, there is always need for a yardstick to measure changes in over-all acreage, yield and production. Indexes properly weighted to take into account differences in yield and value should be established to measure over-all trends in average yield per acre and production.

#### B. Processed Products

Expansion of Statistics on Packs of Processed Vegetables by Types of Processors: Statistics on canned packs are collected by trade associations and by the Census of Manufactures (bi-ennially) on the principal vegetables. This list of crops should be expanded to include pack statistics on all canned vegetables. In addition, complete pack statistics should be collected on vegetables that are frozen, dried or dehydrated. In the field of freezing and dehydration statistics on the processed pack are inadequate at present.

### II. STOCKS STATISTICS

#### A. Raw Products

Expansion of Stocks Statistics to Embrace More Crops and More Frequent Reports: At the present time stocks reports are issued on potatoes as of January 1 and March 1 and on cabbage and onions as of January 1. Monthly stocks reports on potatoes are desired by the industry for the period December 1 to May 1 inclusive. An additional report on cabbage and onions as of November 15 has been requested by representatives of the vegetable industry to furnish information on storage supplies near the beginning of the season. In addition to the 3 crops on which stocks reports are now issued, it is recommended that reports be prepared for beets, carrots, celery, parsnips, squash, sweetpotatoes, turnips and rutabagas. The time and frequency of these additional reports should be determined to suit the marketing period for each crop.

#### B. Processed Products

Expansion of Statistics on Stocks of Processed Vegetables in Various Positions: Partial data of stocks in the hands of processors and wholesale distributors are prepared by the National Cannery Association and the Department of Commerce. These statistics relate only to canned vegetables and do not cover the full list of products. Quarterly stocks statistics are needed for the complete list of vegetables in hands of processors and wholesale distributors segregated to show quantities canned, frozen, dried or otherwise processed.

### III. DISTRIBUTION STATISTICS

#### A. Raw Products

1. Carlot Shipment Records for Additional Crops: Present records are fairly complete, but data are needed for about 10 additional crops.



2. Expansion of Records of Other Shipments Such as Motor Truck and Air Borne: Present records of carlot shipments by rail and boat are very useful in checking production and showing origin and rate of flow to market. These shipments are, however, only a part of the total movement and, as such, fail to give a complete picture of total supplies marketed for each State during the various months. In some areas shipments are almost entirely by means of motor truck and we have little or no information on these shipments. Complete records of shipments by motor truck, l.c.l. express and in mixed cars are needed for each kind of vegetable. With the possibility that air borne transportation may become important in the near future for the shipment of perishable vegetables, it also seems important that appropriate measures be taken to obtain records of these shipments. Complete shipment records of vegetables by all means of transportation are a valuable check at the end of the season against the Department's estimate of production of fresh shipment vegetables.
3. Complete Records of Unloads at Principal Markets: Unload records of carlot shipments by rail and boat are collected for 25 cities and of shipments by motor truck for 13 cities. It is recommended that unload statistics for all methods of transportation be collected for 100 principal terminal markets. This information is needed to show the marketing distribution of vegetables by kinds and by States of origin.

#### B. Processed Products

Movement of Processed Products into Consumption Channels: Rate of movement of processed vegetables from processors' hands through wholesalers and retailers is very important in appraising consumption trends, carryover stocks and future supplies. At present partial information is available quarterly on canned vegetables in hands of processors and wholesale distributors. Processors' stocks are collected by the National Cannery Association and wholesale distributors stocks are collected by the Department of Commerce. Similar information should be made available on additional crops and for other methods of processing such as freezing and drying. In addition it would be helpful in consumption and marketing studies to have information on stocks in retailers' hands at appropriate intervals.

### IV. DISPOSAL AND USE STATISTICS

#### A. Raw Products

1. Expansion of Farm Disposition Statistics to Cover all Vegetable Crops: At the present time estimates of farm disposition of production are made only for potatoes and sweetpotatoes. These statistics show the farm disposal of the crop such as shrinkage and waste, fed to livestock, consumed in households on farms where produced, saved for seed on farms where produced, and total sales. Information on some of these disposition items, particularly such items as loss and waste of the harvested crop, and farm consumption is needed for all vegetable crops. This information is of particular interest to nutritionists and others who are interested in the consumption of vegetables.



2. Estimates of Utilization of Sales for all Crops: For most commercial vegetable crops utilization of sales between fresh and processing outlets is fairly well covered by separate estimates of production for the fresh shipment market and for commercial processing. However, separate information is needed on the quantities of fresh vegetables sold packed and sold loose for use in weighting prices for each method of sale. These data also are needed in estimating cost of production in relation to prices received by growers and in preparing estimates of "in-field" returns on an unharvested basis. As previously indicated under I-A-3 additional information on sales to processors of a number of crops not covered in present estimates is needed.

## V. PRICES, VALUE AND INCOME

### A. Raw Products

1. Complete Series of Prices by Method of Sale: Experience during the war years showed the inadequacy of the Department's series of monthly and average season prices received by growers in determining ceiling and support prices. It had also been found prior to the war that the season average prices as now published cannot be used satisfactorily in connection with marketing agreements set up by growers for the purpose of securing adequate returns for their produce. Urgent requests have been made by growers and others for "prices that can be defined" instead of composite prices representing several methods of sale. Separate series of monthly and season average prices should be set up for the various methods of sale such as f.o.b., delivery in bulk at packing house door and "in-field". Such series of prices would provide price data at definite points in the marketing process and also would be comparable between States as to method of sale.
2. Wholesale Prices at Additional Terminal Markets: At present wholesale prices for vegetables are quoted daily, weekly and monthly at 21 wholesale terminal markets. It is recommended that the number of terminal wholesale markets for which wholesale prices are compiled be increased to 100 so as to give adequate representation to the wholesale price structure and also provide quotations for growers in all of the principal producing areas. Growers have insisted for a long time that price quotations be supplied at frequent periods and in a timely manner for produce marketed in nearby markets.
3. Inauguration of Series of Jobber Prices: No official information is available at present on jobber prices and it is believed that those should be compiled on a weekly basis for about 25 markets in order to show the spread between the terminal wholesale prices and prices at the jobber level.
4. Expansion of retail Price Series: The present series of retail prices compiled by the Bureau of Labor Statistics should be expanded to include more commodities.
5. Indexes of Prices, Value and Cash Income: At present indexes of vegetable prices are prepared for fresh shipment vegetables only. It is recommended that this program be expanded to cover processing crops on an annual basis and that annual indexes of value and cash income be added for both fresh and processing vegetables.



## B. Processed Vegetables

Prices Received by Packers and Wholesale Distributors and Retailers: Wholesale prices of processed vegetables at both the packer and wholesale distributor level are needed in all studies of marketing in order to show the relation between prices paid to growers for the raw product and those received by the processor for the processed commodity. At present no official series of such prices are available. These should be established and the series of retail prices compiled by the Bureau of Labor Statistics should be expanded to cover all important processed vegetables. At present retail prices are available on only green beans, sweet corn, green peas and tomatoes.

## VII. ENUMERATIVE SURVEYS

### A. Census Enumerations

Enumeration of Production of Vegetables Grown for Sale: Census enumerations are notoriously incomplete for commercial vegetables. Many obstacles have been encountered in establishing adequate bench marks of acreage and production through census enumerations. At the present time the Bureau of the Census attempts to enumerate only acreage and value of these crops. In connection with the quinquennial census of agriculture conducted by that Bureau an adequate enumeration even of acreage is impossible because of the short schedule used. Vegetables are regarded as minor crops and space is never available for listing all of the important vegetables. It seems important, therefore, that adequate space be provided on census schedules as the first requisite to obtain complete data on these crops. The second important obstacle is that production is measured in so many different types of containers. It is recommended that the Census attempt to obtain production in conjunction with acreage enumerations in future censuses even though this step may require considerable thought and ingenuity.

### B. Other Surveys

Acreage, Production and Value by Crops of Local Market Vegetables: Since it now appears that the Bureau of the Census will never be able to obtain adequate data on the acreage, production and value of vegetables grown in local market areas, it appears necessary that attempts be made by other agencies to obtain the required information. The need for this information was mentioned under I-A-1. Basic enumerations should be made at 5-year intervals and maintained annually on the basis of sample surveys that reflect from year-to-year changes in acreage, production and value of individual crops.

## VIII. COUNTY STATISTICS

1. Acreage, Yield, Production, etc: Considerable interest exists and many requests are made for county statistics showing acreage, production and value of vegetables. The need for this information has been expressed by growers, railroads, financing agencies, manufacturers of shipping containers and production machinery and by various Government agencies charged with the responsibility of administering various agricultural programs.



2. Motor Truck Shipments: Records of motor truck shipments of vegetables by counties are needed to supplement and complete records now available by counties and shipping points for carlot shipments by rail and boat. Such information is a necessary part of statistics dealing with production, marketing and transportation.

## IX. FARM AND URBAN GARDENS

Number, size and Estimated production and Value by Crops: It is now evident that annual sample surveys are needed to establish the facts of production in both farm and urban gardens. A beginning was made in this type of sampling by the Bureau of Agricultural Economics in 1944 and 1945. To date, however, the sampling has been confined entirely to a national basis and no estimates are made for each State. Because of the intense interest in production of vegetables in farm and urban gardens these surveys should be expanded so that representative data will be obtained for each State. Annual estimates of number, size, production and value by crops are desired on a State basis. Such data are needed by nutritionists, extension workers and others interested in studies of the Nation's food habits and requirements in comparisons with those of other countries.

## X. HORTICULTURAL SPECIALTIES

A number of important horticultural specialties are grown in the field and in green houses or hot houses. Important examples of these are rhubarb, chicory root, bulbs, flowers, mushrooms, and hot house tomatoes and cucumbers. No information is available on an annual basis on the production and value of these specialties and very little information is available in the periodic Censuses of agriculture. Because of the importance of these specialties it is recommended that timely information be collected each year showing acreage, yield and production for all field specialties and that information pertaining to number of establishments, production and value of green house and hot house specialties be compiled.